Work Order ID 97714 \*97714\* Page 1 February-21-13 12:41:25 PM Item ID: D3953-21 Accept \*N900040100\* Setup Start **Revision ID:** Stop Item Name: Gas Spring Bracket \*12\* **Start Date:** 2/21/13 **Start Qty: 12.00 Cust Item ID:** Required Date: 3/08/13 Req'd Qty: 12.00 **Customer:** Reference: Run Start Process Plan: MLJ Date: 13-02-71 Tooling: Approvals: Date: Stop Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ **Tool ID** Tool # Plan Accept Reject Reject Insp. **Work Center ID** Description Code Number Stamp **Run Hours** Qty Qty Draw Nbr **Revision Nbr** D3953 C 100 0.00 \*100\* 12 Waterjet 0.00 Memo FLOW CNC Waterjet 1-Cut as per Dwg D3953 Dwg Rev: 304,125 Prog Rev: 2-Deburr if necessary 110 QC2- Inspect parts off machine FAI/FAIB 0.00 \*110\*

0.00

Memo

QC

Quality Control

NCR: Y	es / No				WORK ORDER NON-C	LONF	UKI	VIANCE / UPDATE		QA Closed:	Date:	
Work Orde	or.				DISPOSITION			AGA	AINST DE	PARTMENT,	/PROCESS	£
Part No					Rework Scrap Use-as-is Work Order Update  Skid-tube Machining Small Fab Thermoforming Finishing Large Fab Composite			•	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other		
Root				Descri	ption of work order update	Initi	ial	Action		Sign &		
Cause	Date	Step	Qty	(	or Non-conformance	Chief	Eng	Description		Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling			Ì								× ,	
Operator												
Material		1						•				
Setup												
Other					**			·	•		,	
Process					•					:		
Supplier												
Training	_											
Unapproved		1	<u> </u>							<u> </u>		
						AULT C	ATE	GORY			·	
Landir	ng Gear			F	General					1		٦.
•	Bending			_  -	Bend	<del></del>	ain		<u> </u>	Ovalized		Pressure/Forced
		ot Conce	ntric to	<sup>0/S</sup>	BOM/Route	<b>—</b>	rdwa		-	Over/Under	<b> </b>	Temperature/Cure
ā	Cracks	(C.:		-	Broken/Damaged	$\blacksquare$		ion Incomplete	-	Part Incorred	<u> </u>	Weld
}		/Crimped	-	<u> </u>	Burrs	$\vdash$	. 5	ions Incomplete/Unclear enance		Part Lost/Mi	SSING	Wrong Stock Pulled
	Cuffs Heat Tre	<b>a</b> t		-	Contamination Countersink	-	ainte slabe			Part Moved Positioned V	Vrong	
-	<del></del>	at on Strip in	Tubo	<del> </del>	Cut Too Short	$\mathbf{H}$	sreac		-	Power Loss/		Other
}	Ripples i		lune		Drill Holes	<del></del>		ı		J. Ower 1033/	Juige	Tother
}	<del></del>	Vaves in E	- - - - - -	<b>⊢</b>		<del></del>	Offset Out of Calibration					
ł		seguence		' <u> </u> -	Finish	$\vdash$	Out of Sequence					

Outside Dimensions

Date:

DQA:

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

<b>Work Ord</b> February-21-13				*977	14*					Page 2
Item ID: Revision ID:	D3953-21			Accept	*N900	<u>04010</u>	<b>N</b> *	Setup Start Stop	רימו	1*
Item Name: Start Date: Required Date: Reference:	Gas Spring B 2/21/13 : 3/08/13	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*		Cust Item I Customer:	D:		3337	*NS	<b>7</b> *
Approvals:		an:	Date:	Tooling: SPC (Y/N):		ate:	-	Run Start Stop	"INK	_
Sequence ID/ Work Center I 120 *120* QC Quality Control	D	Operation Description QC8- Inspect parts - seco	ond check	Set Up/ Run Hour 0.00 0.00 B3	Tool ID	Tool # Plan Code	Accept Qty			nsp.
130 * *120* Small Fab Small Fab			ER HOLE AS PER DWG R IF NECESSARY	0.00			B	Z		Soft.
140 *140* QC		QC5- Inspect part compl		0.00 3 3 2 1			<i>j</i> 2			

Quality Control

											DQA:	Date	•	
NCR:	Yes	/ No				WORK ORDER NON-C	O	NFORM	AANCE / UP	DATE	QA Closed:	Date	:	
Work Ord	or:					DISPOSITION				AGAINST DE	EPARTMENT/PROCESS			
Part I	Part No			Rework Scrap Use-as-is Work Order Update		Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite			<del>-</del> †	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other			
Root					Descri	otion of work order update	ı	nitial	Act	tion	Sign &			
Cause		Date	Step	Qty	C	or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved														
							AUL	T CATE	JORY					
Landi		Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspection Ripples in	Crimped it n Strip in Bend	Tube		General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instruct Mainte Mislabe Misread Offset	on Incomplete ions Incomplete/ nance led	Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V Power Loss/	ct issing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other	
	1 1	Torque W	raves in t	extrusio	n (	Drawing	1	Jour or C	anuration					

Out of Sequence

Outside Dimensions

Date:

Turning Sequence

Wave/Twist in Tube

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID 97714  February-21-13 12:41:25 PM			*977	714*							Page 3	
Item ID:	D3953-21			Accept	*N9000	740	100	)*	Setup	Start	*N	S1*
Revision ID: Item Name:	Gas Spring	Bracket								Stop	*NI	S2*
Start Date: Required Date Reference:	2/21/13	Start Qty: 12.00 Req'd Qty: 12.00	*12 *12		Cust Item II Customer:	<b>)</b> ;						
Approvals:		lan:	Date:	Tooling: SPC (Y/N):	Da Da	-			Run	Start Stop	1/1	R1* R2*
Sequence ID/ Work Center 150 *150* Packaging Packaging	ID	Operation Description Identify as per dwg & Sto	ock Location: ST Ĉ	Set Up/ Run Hours 0.00 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Qt		Reject Number	Insp. Stamp
160 *160* QC Quality Control		QC21- Final Inspection -	Work Order Release	0.00						13	13/20	nt.

										DQA:	Date	2:
Yes	/ No				WORK ORDER NON-O	COI	NFORN	AANCE / UPC	DATE	OA Closed:	Date	<u> </u>
					DISPOSITION			<u> </u>	AGAINST DE			
Work Order: Part No. NCR No.				Rework Scrap Use-as-is Work Order Update	Scrap Machining Small Fab Use-as-is Thermoforming Finishing			Small Fab Finishing			Engineering Quality Other	
		]	I	Descri	ntion of work order update		nitial	Act	ion	Sign &	<del></del>	
1	Date	Step	Qtv	•	•	ł		Descr	iption	Date	Verification	QC Inspector
							T.CATE:	CORV				
	·					AUL	.I CATE	JORY	· · · · · · · · · · · · · · · · · · ·			
	Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspection	Crimped it n Strip in Bend	Tube	<del> </del>	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Inspecti Instruct Mainte Mislabe Misreac Offset	on Incomplete ions Incomplete/U nance led	Jnclear	Part Incorre Part Lost/M Part Moved Positioned V	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	er:	ng Gear Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspection Ripples in	Date Step  Date Step	Date Step Qty  Date Step Qty  Date Step Qty  Region	Date Step Qty Company Control of	Part Step   Qty   Description of work order update   One or Non-conformance   Program   One of the program   One o	Part   Disposition   Rework   Scrap   Use-as-is   Work Order Update   Description of work order update   Or Non-conformance   Chapter   Chapter	Principles of the property of	Part   Skid-tube   Machining   Thermoforming   Large Fab	Part	WORK ORDER NON-CONFORMANCE / UPDATE  QA Closed:  DISPOSITION Rework Scrap Use-as-is Work Order Update Date  No. Date Step Qty Description of work order update or Non-conformance  Date Step Qty Or Non-conformance  Date Step Qty Description of Work order update or Non-conformance  Date Step Qty Description of Work order update or Non-conformance  FAULT CATEGORY  General Bending Description  Grain Ovalized Centre Not Concentric to O/S BOM/Route Hardware Crushed/Crimped. Burrs Instructions Incomplete Part Incorrect Crushed/Crimped. Burrs Instructions Incomplete/Unclear Part Lost/M Maintenance Part Moved Part Move	WORK ORDER NON-CONFORMANCE / UPDATE  OA Closed: Date  DISPOSITION  Rework Scrap Use-as-is Work Order Update Or Non-conformance  Date Step Oty Or Non-conformance  FAULT CATEGORY  Gear  General  Bending Sending Sending Sending Sending Sending Sending Ovalized Over/Under tolerance Centre Not Concentric to O/S Cracks Broken/Damaged Instructions incomplete Order Service Order Update Order Sending Centre Not Concentric to O/S Cracks Broken/Damaged Instructions incomplete Order Order Update Order Order Update Order Order Update Order Update Order Order Update Order Or

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

## **Picklist Print**

February-21-13 12:41:25 PM

Work Order ID:

97714

Parent Item:

D3953-21

Parent Item Name:

Gas Spring Bracket

**Start Date: 2/21/13** 

Required Date: 3/08/13

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP RevA: new issue DD 09.11.30 verified by:EC 10.03.02 verified by:EC

IPP Rev:B as per dwg revC DD

192

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued A	Date Issued	Status
<b>M304S11GA</b> 304/316 0.125 Sheet		Purchased	No			100	sf	266.5500	0.0144	0.1818948	- V	13.03	15
				<b>Location</b>		Loc Oty	Lo	c Code					
				MAT020		266.55							
				1225	521	74.55							

24445

										DQA:	Date:	
NCR:	Yes /	No				WORK ORDER NON-C	ONFO	RMANCE / UP		QA Closed:	Date:	
Work Orde	er:					<b>DISPOSITION</b> Rework		Skid-tube	AGAINST DE	PARTMENT	<b>PROCESS</b> Water Jet	Engineering
Part N			· · · · · · · · · · · · · · · · · · ·			Scrap Use-as-is Work Order Update	The	Machining rmoforming Large Fab	Small Fab Finishing Composite		d. Eng. Coor. e/Packaging Supplier	Quality Other
Root		. [			Descri	ption of work order update	Initia	Ad	tion	Sign &		
Cause	Da	ate	Step	Qty	C	or Non-conformance	Chief E	ng Desc	ription	Date	Verification	QC Inspector
Doc/Data		Ī										
Equip/Tooling		İ				•						
Operator												
Material												
Setup												
Other												

#### **Landing Gear** General Pressure/Forced Bend Grain Ovalized Bending BOM/Route Over/Under tolerance Temperature/Cure Centre Not Concentric to O/S Hardware Broken/Damaged Weld Inspection Incomplete Part Incorrect Cracks Instructions Incomplete/Unclear Part Lost/Missing Wrong Stock Pulled Crushed/Crimped. Burrs Cuffs Maintenance Part Moved Contamination Heat Treat Mislabeled Positioned Wrong Countersink Inspection Strip in Tube Power Loss/Surge Other Cut Too Short Misread Drill Holes Offset Ripples in Bend Torque Waves in Extrusion Drawing Out of Calibration Turning Sequence Finish Out of Sequence Folio Wave/Twist in Tube Outside Dimensions

**FAULT CATEGORY** 

Process
Supplier
Training
Unapproved

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

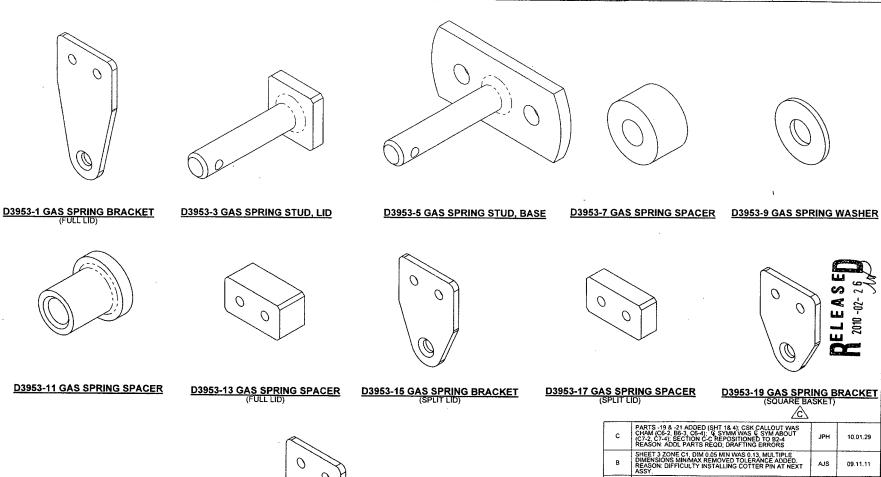
DART AEROSPACE LTD	Work Order:	97714
Description: Gas Spring Bracket	Part Number:	D3953-21
Inspection Dwg: D3953 Rev: C		Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.194	+0.005/-0.001	0.194	V		VerN	MM-01
Ø0.257	+0.006/-0.001	0.257	V		vern vern vern vern	
0.625	+/-0.010	0.622	/		ver	
1.38	+/-0.030	1.382			uer !	
0.38	+/-0.010	0.378	/		ver	
0.375	+/-0.010	0.371	/		uen.	
1.00	+/-0.030	1.00	/		ver	
1.500	+/-0.010	1.503	1/		vun	
0.125	+/-0.010					
		700				
				-		
			ÇAS			

		27	- <del></del>		
Measured by:	whit	Audited by:		Preliminary Approval:	
Date:	13.03.15	Date: 15 \$	19	Date:	

Rev	Date	Change	Revised by	Δ	Approved
Α	10.06.07	New Issue	KJ Ø		M
			·	<del>/                                     </del>	· /36/



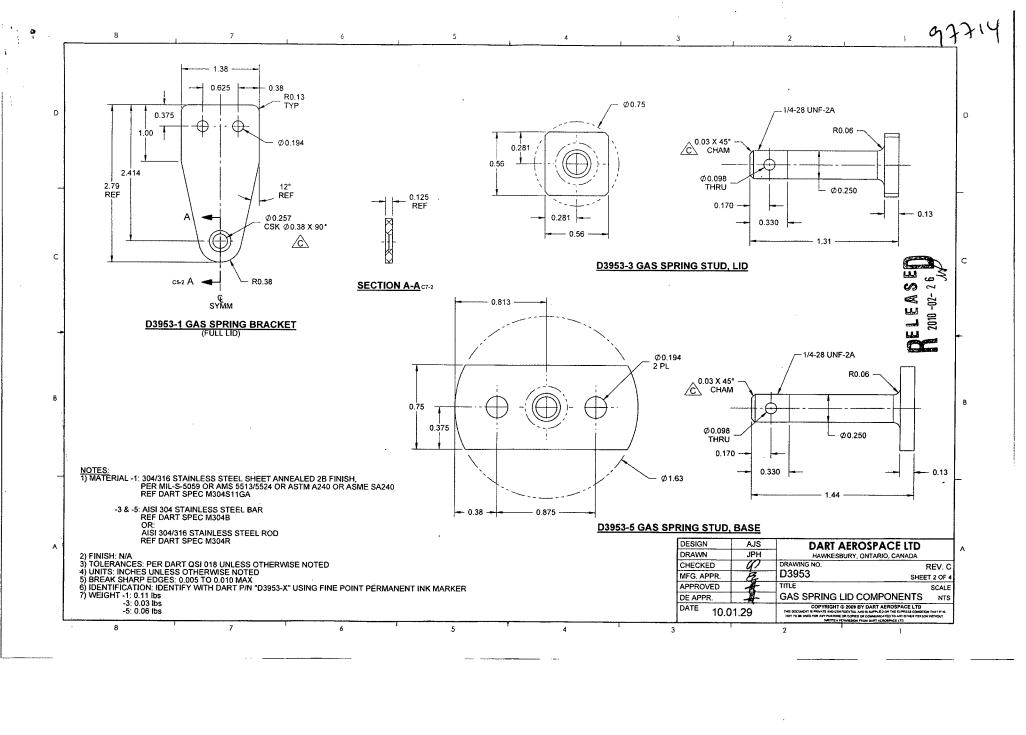


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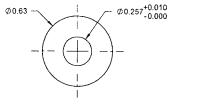
D3953-21 GAS SPRING BRACKET
(SQUARE BASKET)

AJS 09.07.27 BY DATE A NEW ISSUE REV. DESCRIPTION DESIGN AJS DART AEROSPACE LTD DRAWN JPH HAWKESBURY, ONTARIO, CANADA CHECKED DRAWING NO. REV. C D3953 MFG, APPR. SHEET 1 OF 4 APPROVED TITLE SCALE GAS SPRING LID COMPONENTS NTS DE APPR. COPYRIGHT © 2009 BY DART AEROSPACE LTD DATE 10.01.29

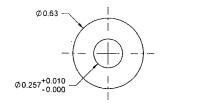
SHOP COPY—
RESPECTO
PNONFERING
UNCONFRO'TE DICOPY
STREETTO A RESPONENT
WILD ART SCINCE
TO O'RE ORDER
NO. 977-14 MLS
13-02-21

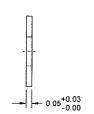


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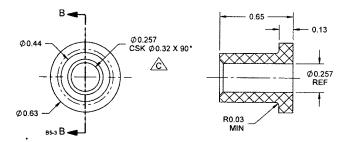


- 0.37<sup>+0.00</sup>



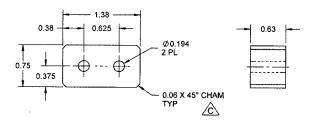


### **D3953-7 GAS SPRING SPACER**



**D3953-11 GAS SPRING SPACER** 

SECTION B-B B7-3



### **D3953-13 GAS SPRING SPACER**

**D3953-9 GAS SPRING WASHER** 

NOTES:	
	· ·
1) MATERIAL -7,-9 & -11: DELRIN II 150	E OD ACETDONICO ACETAL DI ACE
REF DART SP	EC M-DELRIN-R

-13: AISI 304 STAINLESS STEEL BAR REF DART SPEC M304B

7

C

- 2) FINISH: N/A
  3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  4) UNITS: INCHES UNLESS OTHERWISE NOTED
  5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  6) IDENTIFICATION -13 ONLY: IDENTIFY WITH DART P/N "D3953-13" USING FINE POINT PERMANENT INK MARKER
  7) WEIGHT -7/-9/-11: < 0.01 lbs EACH
  -13: 0.17 lbs

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	a	DRAWING NO. RE	v. c
MFG. APPR.	8	D3953 SHEET 3	OF 4
APPROVED	-	TITLE	CALE
DE APPR.	-#	GAS SPRING LID COMPONENTS	NTS
DATE 10.01.29		COPYRIGHT © 2009 BY DART AEROSPACE LTD  THIS DOCUMENT IN PRIVATE AND CONTRICTORY. AND IS SUPPLIED ON THE EXPRESS CONTRICTORY THAT IT IS  NOT TO BE USED FOR ANY PRACES ON CONTRICTORY TO NOT THE PERSON WITHOUT	

